



Unpacking the Water-Energy-Food Nexus from the regional to local level

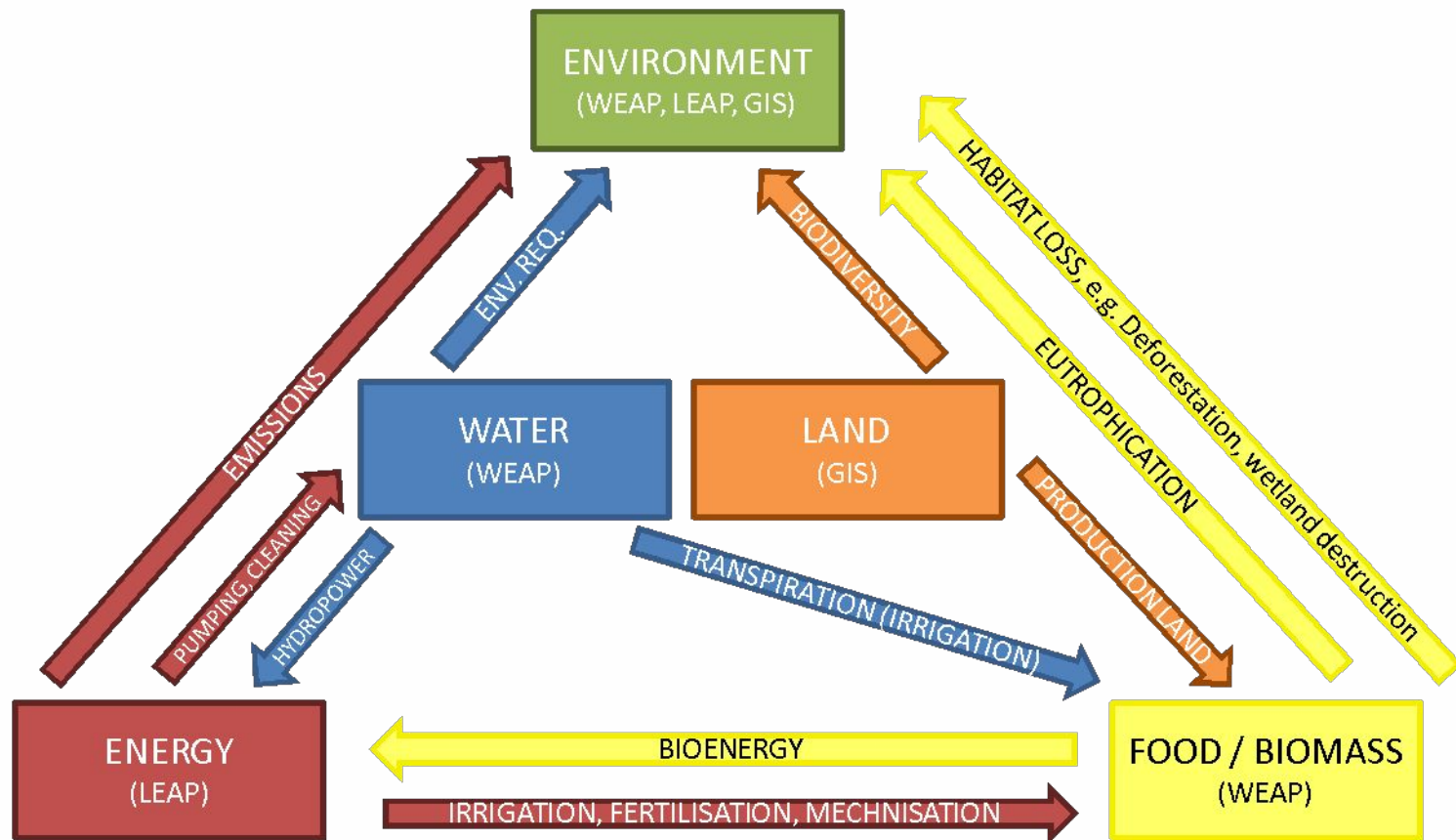
Sustainable Sanitation Alliance

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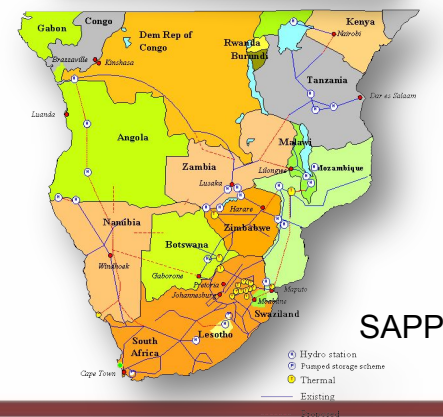
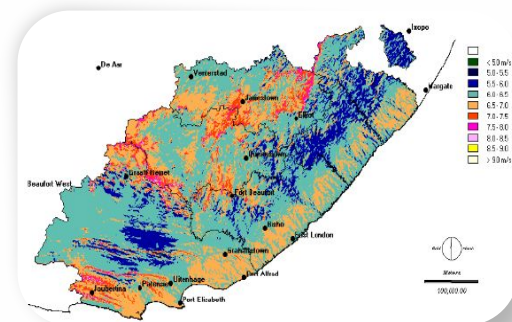
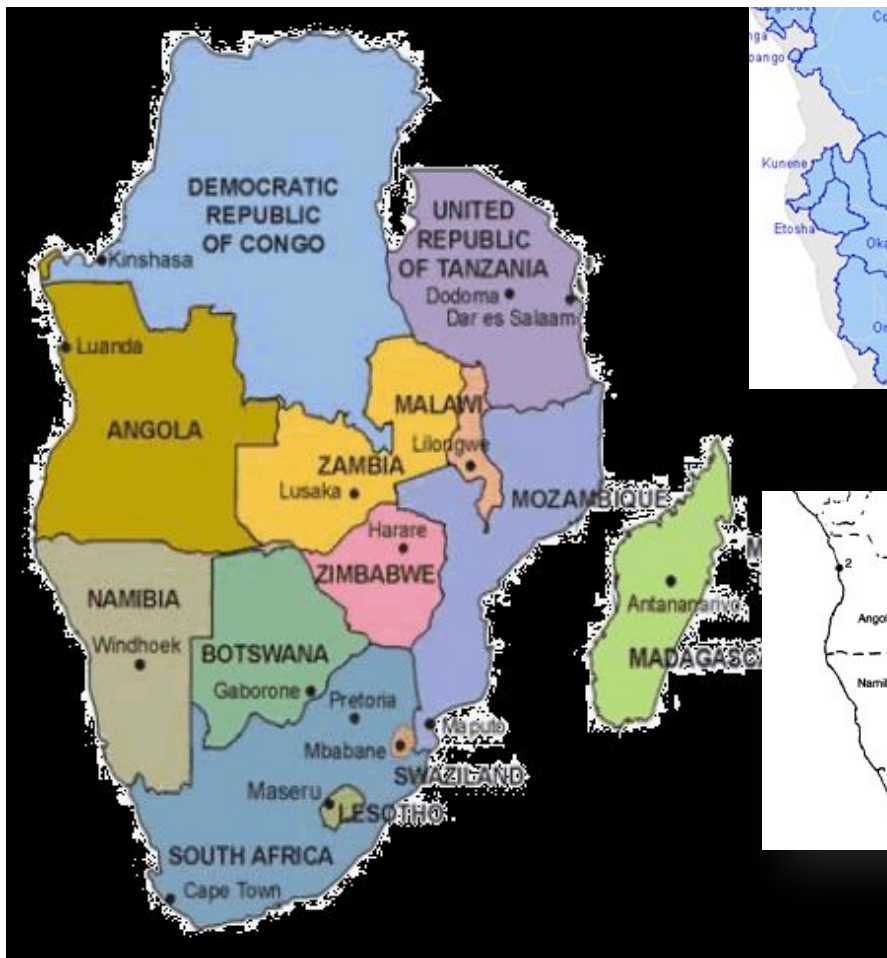
The nexus – an analytical framework



The nexus is scale and context specific

- Global scale
 - CC scenarios, new climate economy, gobal compact?
- ✓ Macro-Region scale
 - Economic, social , trade, health, education, peace and security
 - Building common objectives, norms and values - "Energy union"
- National scale
 - Policy cohesion to address multiple national objectives
 - E.g hydropower storage as a lever intermittent renewable energy
- ✓ Basin/Catchment scale
 - Competition & tradeoffs between users: irrigation, hydropower, domestic water supply
 - Finding synergies and new win-win opportunities
- ✓ Urban scale
 - Resource stocks and flows external and internal, business models for services

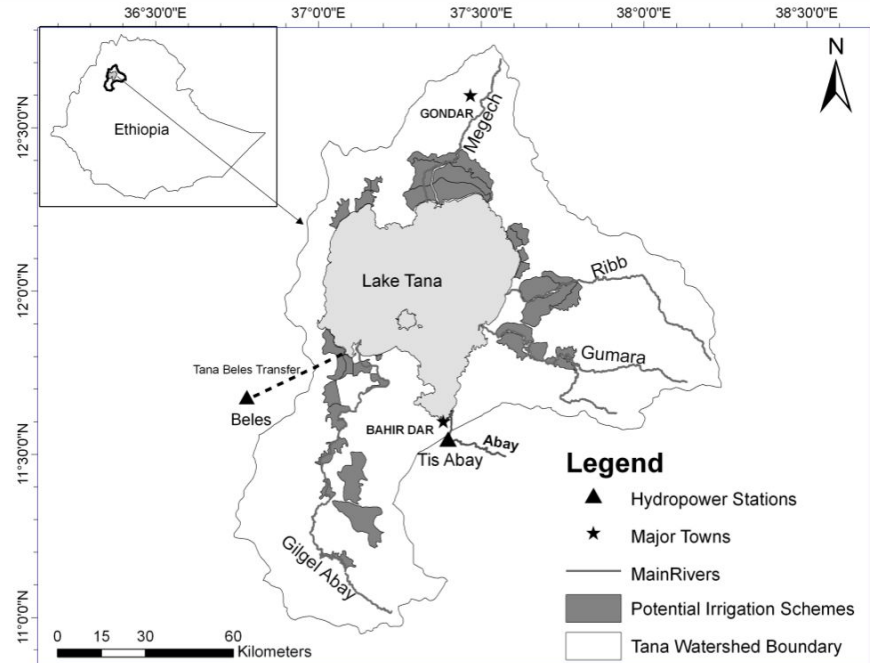
Macro-region scale: Southern African Development Community (SADC)



Catchment scale: Nexus research in Lake Tana & Beles river basin, Ethiopia

Drivers

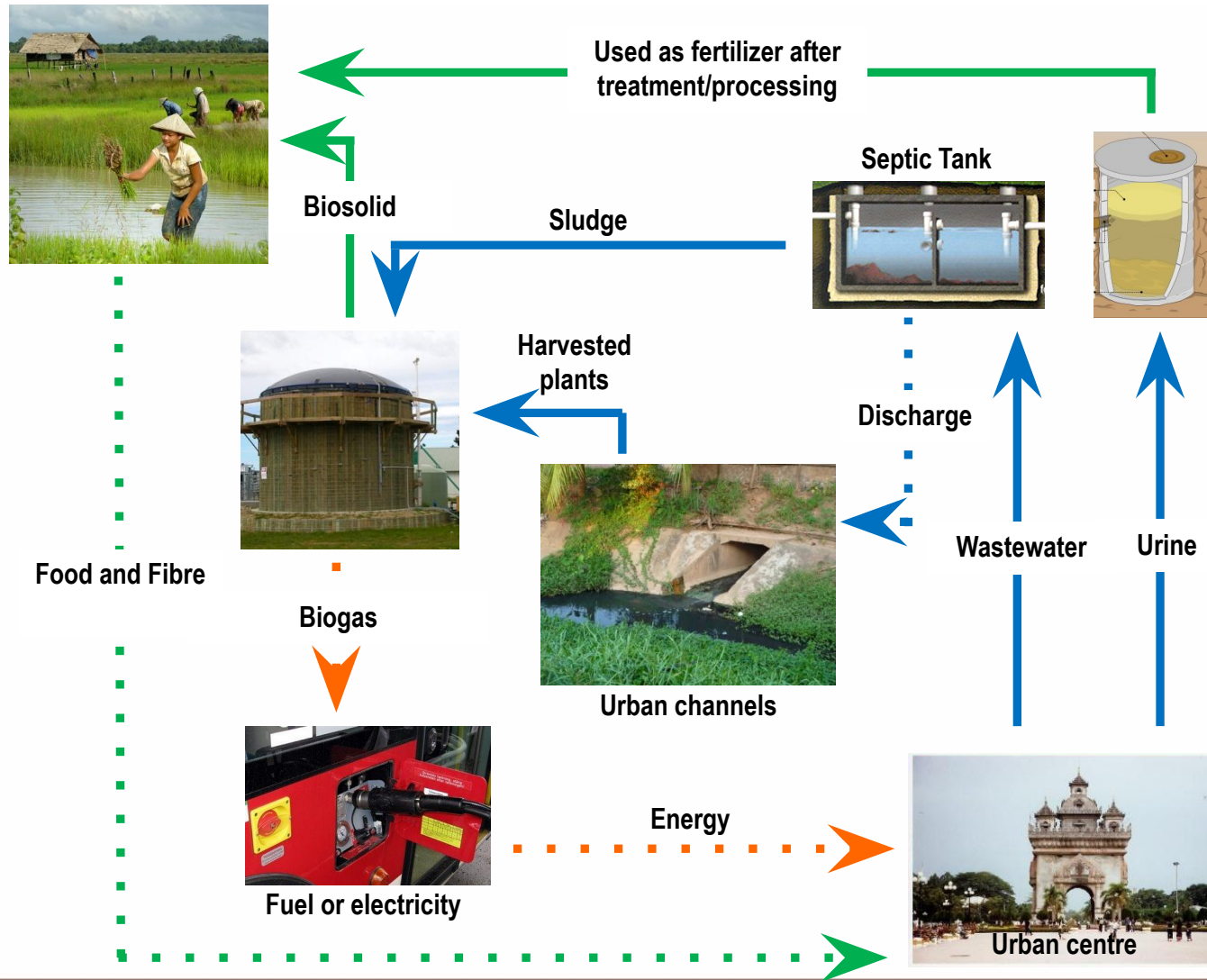
- Economic + population growth, national growth plan
- Increased irrigation development
- Subsistence to commercial agriculture
- Foreign direct investments into biofuels
- Hydropower development
- Environmental degradation



"Irrigation for food or hydropower for energy production"?

"Change in HEP' operation rules for multiple benefits"

Urban scale: Resource based sanitation value chain, Vientiane, Laos



CITYBLUES++
Climate Compatible Development in Vientiane

Conclusion – Nexus Value Add

- Increases the understanding of dynamic systems taking multiple sector objectives into account
 - Analytical approaches that are scale and context specific
 - From qualitative to quantitative analysis
 - Linkages/challenges/options
- Contributes to assess governing options at different scales
 - Norms, institutional structures and options
 - Policy coherence
- Identifies management options & innovation needs
 - Resource planning
 - Operational aspects, synergies & tradeoffs
 - Solution oriented